

WHAT IS CLAIMED IS:

1. A system for use with a fuel dispenser position in a refueling environment, said system comprising:

a microphone assembly disposed at said fuel dispenser
5 position;

said microphone assembly including a plurality of directional microphones; and

a processing assembly operatively associated with said microphone assembly, said processing assembly being configured to
10 process signals operatively generated by the directional microphones of said microphone assembly.

2. The system as recited in Claim 1, wherein said processing assembly being configured to form a composite signal using signals from at least two directional microphones of said microphone assembly.

3. The system as recited in Claim 2, further comprises:
an operator facility; and

a means to direct the composite signal formed by said processing assembly to said operator facility.

4. The system as recited in Claim 1, wherein said processing assembly being configured to determine which microphone signal among the signals operatively generated by the directional microphones of said microphone assembly optimally
5 satisfies a predetermined performance criteria.

5. The system as recited in Claim 4, further comprises:
an operator facility; and

a means to direct the microphone signal operatively
associated with the optimal performance determination made by
5 said processing assembly to said operator facility.

6. The system as recited in Claim 1, further comprises:
an operator facility including a plurality of directional
microphones; and

a coupling means to provide operative coupling between said
5 operator facility and said fuel dispenser position to enable
communication therebetween.

7. The system as recited in Claim 6, further comprises:
a first speaker system disposed at said fuel dispenser
position; and

a second speaker system disposed at said operator facility.

8. The system as recited in Claim 7, wherein said coupling
means being configured to enable communication between the
directional microphones of said microphone assembly and said
second speaker system, and to enable communication between the
5 directional microphones of said operator facility and said first
speaker system.

9. The system as recited in Claim 1, further comprises:

a fuel dispenser apparatus disposed at said fuel dispenser
position; and

a dispenser controller configured to operatively control
5 said fuel dispenser apparatus in response to at least one command
signal;

wherein said processing assembly being configured further to
operatively process at least one microphone signal and to
generate therefrom at least one command-type signal for use by
10 said dispenser controller.

10. The system as recited in Claim 1, further comprises:

a voice-activatable fuel dispenser system disposed at said
fuel dispenser position and operatively associated with said
microphone assembly.

11. The system as recited in Claim 1, further comprises:

a packet-based data network configured for connection to at
least one of said microphone assembly and said processing
assembly.

12. The system as recited in Claim 1, wherein said
processing assembly being configured further to operatively
provide processed microphone signals in an Internet Protocol (IP)
format.

13. The system as recited in Claim 1, wherein the
directional microphones of said microphone assembly being
arranged to define a desired acoustic coverage pattern.

14. A system, comprising:

a refueling environment including a fuel dispenser position,
said fuel dispenser position including a microphone system;

said microphone system including a plurality of directional
5 microphones;

an operator facility in said refueling environment; and

a coupling means configured to provide operative coupling
between said fuel dispenser position and said operator facility.

15. The system as recited in Claim 14, further comprises:

a processing system configured to process signals
operatively generated by the directional microphones of said
microphone system.

16. The system as recited in Claim 15, wherein said
processing system being configured further to form a composite
signal using signals from at least two directional microphones of
said microphone system.

17. The system as recited in Claim 16, further comprises:

a means to direct the composite signal to said operator
facility using said coupling means.

18. The system as recited in Claim 15, wherein said
processing system being configured further to determine which
microphone signal among the signals operatively generated by the
directional microphones of said microphone system optimally
5 satisfies a predetermined performance criteria.

19. The system as recited in Claim 18, further comprises:

a means to direct the microphone signal operatively associated with the optimal performance determination made by said processing system to said operator facility.

20. The system as recited in Claim 14, wherein said operator facility further comprises:

a plurality of operator-related directional microphones.

21. The system as recited in Claim 20, wherein said operator facility further comprises:

5 a processing unit configured to process signals operatively generated by said plurality of operator-related directional microphones.

22. The system as recited in Claim 21, wherein said processing unit being configured further to form a composite signal using signals from at least two operator-related directional microphones.

23. The system as recited in Claim 22, further comprises:

a means to direct the composite signal to said fuel dispenser position using said coupling means.

24. The system as recited in Claim 21, wherein said processing unit being configured further to determine which microphone signal among the signals operatively generated by the operator-related directional microphones optimally satisfies a
5 predetermined performance criteria.

25. The system as recited in Claim 24, further comprises:

a means to direct the microphone signal operatively associated with the optimal performance determination made by said processing unit to said fuel dispenser position.

26. The system as recited in Claim 14, wherein said operator facility includes a point-of-sale (POS) terminal.

27. The system as recited in Claim 14, further comprises:

a voice-activatable fuel dispenser system disposed at said fuel dispenser position and operatively associated with said microphone system.

28. A system for use in a refueling environment having a fuel dispenser position and an operator facility, said system comprising:

a dispenser intercom system disposed proximate said fuel dispenser position, said dispenser intercom system including a first speaker system and a first microphone system;

said first microphone system comprising a plurality of directional microphones;

an operator intercom system disposed proximate said operator facility, said operator intercom system including a second speaker system and a second microphone system; and

a coupling means configured to provide operative coupling between said dispenser intercom system and said operator intercom system.

29. The system as recited in Claim 28, further comprises:

a first processor operatively associated with said dispenser intercom system, said first processor being configured to process signals operatively generated by the directional microphones of
5 said first microphone system.

30. The system as recited in Claim 29, wherein said first processor being configured further to form a composite signal using signals from at least two directional microphones of said first microphone system, and to direct the composite signal to
5 said operator intercom system using said coupling means.

31. The system as recited in Claim 29, wherein said first processor being configured further to determine which microphone signal among the microphone signals operatively generated by said first microphone system optimally satisfies a predetermined
5 performance criteria, and to direct the microphone signal operatively associated with the optimal performance determination to said operator intercom system using said coupling means.

32. The system as recited in Claim 29, wherein said first processor being configured further to operatively provide processed microphone signals in an Internet Protocol (IP) format.

33. The system as recited in Claim 29, further comprises:

a fuel dispenser apparatus disposed at said fuel dispenser position; and

a dispenser controller configured to operatively control
5 said fuel dispenser apparatus in response to at least one command
signal;

wherein said first processor being configured further to
process at least one microphone signal operatively generated by
said first microphone system and to generate therefrom at least
10 one command-type signal for use by said dispenser controller.

34. The system as recited in Claim 28, wherein said second
microphone system includes a plurality of directional
microphones.

35. The system as recited in Claim 34, further comprises:

a second processor operatively associated with said operator
intercom system, said second processor being configured to
process signals operatively generated by the directional
5 microphones of said second microphone system.

36. The system as recited in Claim 35, wherein said second
processor being configured further to form a composite signal
using signals from at least two directional microphones of said
second microphone system, and to direct the composite signal to
5 said dispenser intercom system using said coupling means.

37. The system as recited in Claim 35, wherein said second
processor being configured further to determine which microphone
signal among the microphone signals operatively generated by said
second microphone system optimally satisfies a predetermined

5 performance criteria, and to direct the microphone signal
operatively associated with the optimal performance determination
to said dispenser intercom system using said coupling means.

38. The system as recited in Claim 35, wherein said second
processor being configured further to operatively provide
processed microphone signals in an Internet Protocol (IP) format.

39. The system as recited in Claim 28, wherein said operator
facility includes a point-of-sale (POS) terminal.

40. The system as recited in Claim 28, wherein said coupling
means includes a packet-based data network.

41. The system as recited in Claim 28, further comprises:

a voice-activatable fuel dispenser system disposed at said
fuel dispenser position and operatively associated with said
first microphone system.

42. A system for use in a refueling environment having a
fuel dispenser position and also for use in combination with an
operator facility, said system comprising:

a first communication system disposed at said fuel dispenser
5 position, said first communication system including a first
microphone system and a first speaker system;

said first microphone system including a plurality of
directional microphones; and

a communications link configured to enable operative
10 communications between said first communication system and said
operator facility.

43. The system as recited in Claim 42, wherein said
communications link being configured further to enable said first
microphone system to transmit microphone signals operatively
generated thereby to said operator facility, and to enable said
5 first speaker system to receive audio-related signals from said
operator facility.

44. The system as recited in Claim 42, further comprises:
a voice-activatable fuel dispenser system disposed at said
fuel dispenser position and operatively associated with said
first microphone system.

45. The system as recited in Claim 42, wherein said
communications link includes a packet-based data network.

46. The system as recited in Claim 42, wherein said operator
facility being disposed remote from said refueling environment.

47. The system as recited in Claim 42, wherein said operator
facility being disposed in said refueling environment and
including a point-of-sale (POS) terminal.

48. The system as recited in Claim 42, wherein said operator
facility includes a plurality of directional microphones.

49. The system as recited in Claim 42, further comprises:

a first processor operatively associated with said first communication system, said first processor being configured to process signals operatively generated by the directional
5 microphones of said first microphone system in accordance with a predetermined processing function.

50. The system as recited in Claim 49, wherein the predetermined processing function performed by said first processor being defined by the formation of a composite signal using signals from at least two directional microphones of said
5 first microphone system.

51. The system as recited in Claim 49, wherein the predetermined processing function performed by said first processor being defined by a determination of which microphone signal among the signals operatively generated by the directional
5 microphones of said first microphone system optimally satisfies a predetermined performance criteria.